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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,567	10/18/2000	Yoshihiko Hibino	001248	8750

7590 04/24/2002

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Washington, DC 20006

EXAMINER

SCHWARTZ, PAMELA R

ART UNIT	PAPER NUMBER
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1774

3

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-9

Office Action Summary

Application N .

09/673,567

Applicant(s)

HIBINO ET AL.

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1 and 2 and the specification contain recitations of Japanese Industrial Standards, the particulars of which are not set forth in the specification. Since it is unclear whether these standards would be available to one of ordinary skill in the art in English and available in this country, the specification is non-enabling for the claims relying upon these standards. This rejection may be overcome by demonstrating that these standards are available in English and by submitting them for the record.

The specification also does not appear to enable one of ordinary skill in the art to make the invention when it requires the presence of a "polyvinyl alcohol-cation monomer graft polymer." The only examples of what is meant by the term appear to references to foreign tradenamed materials. No specific example of monomers have been set forth.

2. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Use of the term "main" in claim 1 is confusing, because it is unclear in what sense the wood pulp is "main" and how much must be present for it to be a "main" starting material. Is it "main" in volume, in weight, in function? How much does the word "main" require be present in the layer? Clarification is requested.

The term "polyvinyl alcohol-cation monomer graft polymer" is also indefinite because it is unclear what would be included in the scope of this term and the specification does not appear to define what is included.

3. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Igarashi et al. (5,882,755) or Sakaki et al. (6,174,056). Igarashi et al disclose an ink jet recording medium having a support which may contain wood pulp, waste paper pulp, pigment and ash preventative, and an ink jet recording layer that may contain fluorescent brightener, cationic polymer and a water-based polymer binder (see col. 10, line 66 to col. 13, line 36). The coating may be applied using a size press (see col. 13, line 64 to col. 14, line 5). The reference does not specifically disclose values for whiteness, fluorescence intensity and ash content, but because the reference specifically mentions the use of ash preventative and fluorescent brighteners, it would have suggested to one of ordinary skill in the art that these parameters should be optimized. Additionally, whiteness, is a conventional parameter to optimize with respect to paper supports and it would have been obvious to one of ordinary skill in the art to do so using conventional additives such as pigments and whiteners in the support.

Sakaki et al. disclose a similar medium having a substrate that may contain wood pulp, regenerated paper pulp, and calcium carbonate, and an ink receiving coating that may contain water-soluble binders, fluorescent brighteners, and cationic resins (see col. 3, line 63 to col. 5, line 22). The coating may be applied using a size press. The reference does not set forth the desirable properties included in the instant claims directed towards controlling the whiteness, fluorescent brightness of the medium, and

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the ash content of the support, however, these properties are all conventional, as are the methods of controlling them, and it would have been obvious to one of ordinary skill in the art to do so in order to obtain a medium of desired quality.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Igarashi et al. or Sakaki et al as applied to claims 1, 2, 4 and 5 above, and further in view of Yasuda et al. (4,944,988) and Koide et al. (5, 656,379). Koide et al. teach the use and control of fluorescent brightness in recording papers and teaches that the type of fluorescent brightener used by applicants is well known in the art (see col. 3, lines 39-61). The reference also teaches controlling the amount of brightener in order to achieve desirable results. Yasuda et al. teaches forming an ink jet recording layer with a combination of a polyvinyl alcohol and other binder materials in order to achieve a medium with good printing quality and in particular, excellent surface hardness (see the Abstract and col. 7, line 22- col. 8, line 48). Based upon these teachings, it would have been obvious to one of ordinary skill in the art to utilize a diaminostilbene-disulfonic acid derivative as the fluorescent brightener of the primary references and to control the quantity of the additive as taught by the secondary reference in order to maximize desirable visual properties. In addition, it would have been obvious to one of ordinary skill in the art to utilize a polyvinyl alcohol graft copolymer as one of the binders or additives of the primary references in order to increase surface hardness of the resulting medium.

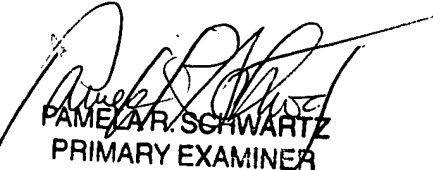
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela R. Schwartz whose telephone number is 703-

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308-2424. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on (703) 308-0449. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

PRSchwartz
April 22, 2002



PAMELA R. SCHWARTZ
PRIMARY EXAMINER